

String

- A string is a sequence of characters.
- A character is simply a symbol. For example, the English language has 26 characters.
- Computers do not deal with characters, they deal with numbers (binary).
- Even though you may see characters on your screen, internally it is stored and manipulated as a combination of 0's and 1's.
- This conversion of character to a number is called encoding, and the reverse process is decoding. ASCII and Unicode are some of the popular encoding used.
- In Python, string is a sequence of Unicode character.
- Unicode was introduced to include every character in all languages and bring uniformity in encoding.
- Strings can be created by enclosing characters inside a single quote or double quotes.
- Like array we can access characters from string by specifying the index.

Consider below application which demonstrate concept of String

```
print("---- Marvellous Infosystems by Piyush Khairnar----")

print("Demonstration of Strings")

name = "Marvellous"
newName = 'Marvellous'

print(name)
print(type(name))
print(newName)
print(type(newName))

# as String is array of characters we can access using subscript operator

print(name[0])
print(name[9])
# print(name[10]) Index out of bound

#negative index access elements from right to left
print(name[-1])
print(name[-2])
print(name[-3])

# We can also print characters in range
print(name[0:3])
print(name[2:3])
print(name[2:])
print(name[:3])

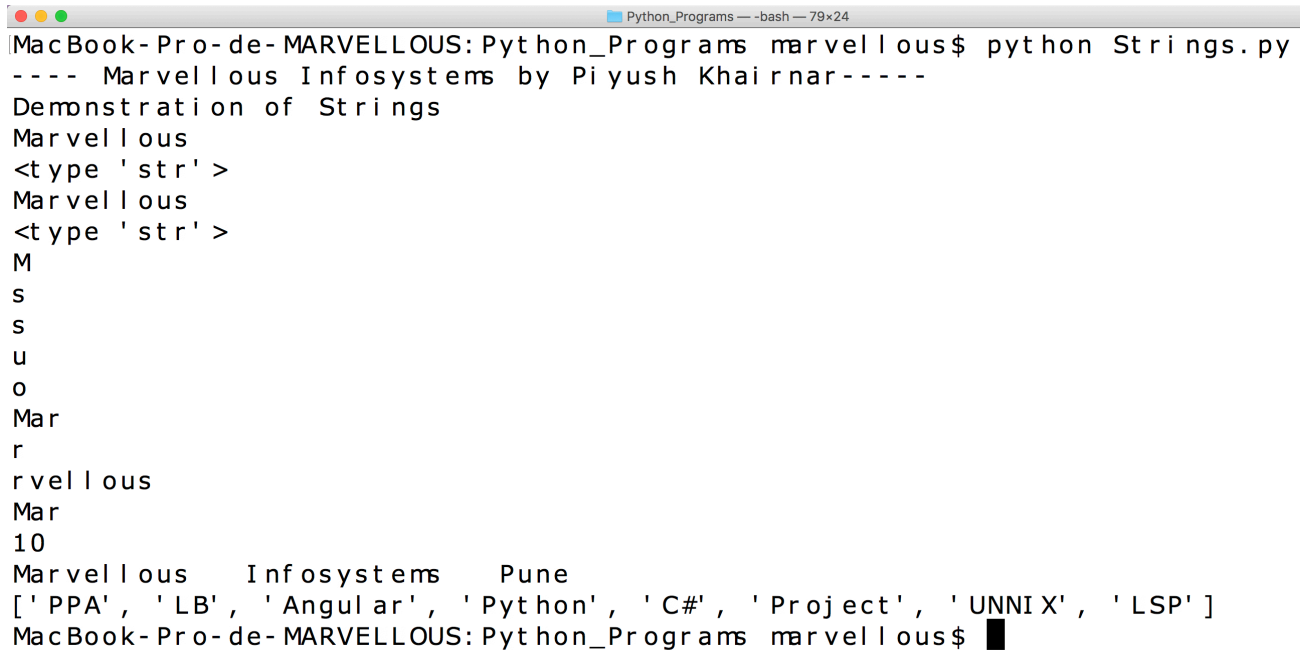
# strings in python are immutable
# name[0] = 'm'

# we can use len function to calculate length of string
print(len(name))
```

```
#strip method removes whitespaces from begining and end  
className = "  Marvellous  Infosystems  Pune  "  
print(className.strip())
```

```
# By using split we can tokenize the strinng  
Batchs = "PPA,LB,Angular,Python,C#,Project,UNNIX,LSP"  
print(Batchs.split(","))
```

Output of above application



```
MacBook-Pro-de-MARVELLOUS: Python_Programs marvellous$ python Strings.py  
---- Marvellous Infosystems by Piyush Khairnar ----  
Demonstration of Strings  
Marvellous  
<type 'str'>  
Marvellous  
<type 'str'>  
M  
s  
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o  
Mar  
r  
rvellous  
Mar  
10  
Marvellous Infosystems Pune  
['PPA', 'LB', 'Angular', 'Python', 'C#', 'Project', 'UNNIX', 'LSP']  
MacBook-Pro-de-MARVELLOUS: Python_Programs marvellous$
```